SUMMARY OF SAFETY AND EFFECTIVENESS Hitachi EUB-8500 Diagnostic Ultrasound Scanner

Device Description

The Hitachi EUB-8500 Diagnostic Ultrasound Scanner is a Track 3 diagnostic ultrasound pulsed Doppler and pulsed echo imaging system capable of the following operating modes: B, M, Pulsed Doppler, Continuous Wave Doppler, Color Flow (including Amplitude Doppler). It is also intended for harmonic imaging, superficial musculoskeletal imaging, and 3D imaging.

Safety

As a Track 3 ultrasound device, the Hitachi EUB-8500 Diagnostic Ultrasound Scanner complies with the "Standard for Real-Time Display of Thermal and Mechanical Acoustic Output Indices on Diagnostic Ultrasound Equipment (1992)", published by NEMA as UD-3. With respect to limits on acoustic outputs, the Hitachi EUB-8500 Diagnostic Ultrasound Scanner complies with the guideline limits set in the April 14, 1994, Revision of 510(k) Diagnostic Ultrasound Guidance.

With regard to general safety, the Hitachi EUB-8500 Diagnostic Ultrasound Scanner is designed to comply with IEC 60601-1 (1998) Medical Electrical Equipment, Part 1, General Requirements for Safety.



Food and Drug Administration 9200 Corporate Boulevard Rockville MD 20850

FEB 1 1 2002

Mr. Walter Weyburne Regulatory Affairs Hitachi Medical Corporation of America 660 White Plains Road TARRYTOWN NY 10591

Re: K013722

Trade Name: EUB-8500 Diagnostic Ultrasound Scanner

Regulation Number: 21 CFR 892.1550

Regulation Name: Ultrasonic pulsed doppler imaging system

Product Code: 90 IYN

Regulation Number: 21 CFR 892.1560

Regulation Name: Ultrasonic pulsed echo imaging system

Product Code: 90 IYO

Regulation Number: 21 CFR 892.1570

Regulation Name: Diagnostic ultrasonic transducer

Product Code: 90 ITX Regulatory Class: II Dated: January 24, 2002 Received: January 25, 2002

Dear Mr. Weyburne:

We have reviewed your Section 510(k) premarket notification of intent to market the device referenced above and we have determined the device is substantially equivalent (for the indications for use stated in the enclosure) to legally marketed predicate devices marketed in interstate commerce prior to May 28, 1976, the enactment date of the Medical Device Amendments, or to devices that have been reclassified in accordance with the provisions of the Federal Food, Drug, and Cosmetic Act (Act). You may, therefore, market the device, subject to the general controls provisions of the Act. The general controls provisions of the Act include requirements for annual registration, listing of devices, good manufacturing practice, labeling, and prohibitions against misbranding and adulteration.

This determination of substantial equivalence applies to the following transducers intended for use with the EUB-8500 Diagnostic Ultrasound Scanner, as described in your premarket notification:

Transducer Model Number

EUP-C514 EUP-ES322 EUP-ES533 EUP-F531 EUP-L54M EUP-L53S EUP-OL334 EUP-R53W EUP-R530 EUP-TC3 EUP-U533 EUP-U533 EUP-V53W

If your device is classified (see above) into either class II (Special Controls) or class III (PMA), it may be subject to such additional controls. Existing major regulations affecting your device can be found in the Code of Federal Regulations, Title 21, Parts 800 to 898. In addition, FDA may publish further announcements concerning your device in the Federal Register. Please be advised that FDA's issuance of a substantial equivalence determination does not mean that FDA has made a determination that your device complies with other requirements of the Act or any Federal statutes and regulations administered by other Federal agencies. You must comply with all the Act's requirements, including, but not limited to: registration and listing (21 CFR Part 807); labeling (21 CFR Part 801); good manufacturing practice requirements as set forth in the quality systems (QS) regulation (21 CFR Part 820); and if applicable, the electronic product radiation control provisions (Sections 531-542 of the Act); 21 CFR 1000-1050.

This determination of substantial equivalence is granted on the condition that prior to shipping the first device, you submit a postclearance special report. This report should contain complete information, including acoustic output measurements based on production line devices, requested in Appendix G, (enclosed) of the Center's September 30, 1997 "Information for Manufacturers Seeking Marketing Clearance of Diagnostic Ultrasound Systems and Transducers." If the special report is incomplete or contains unacceptable values (e.g., acoustic output greater than approved levels), then the 510(k) clearance may not apply to the production units which as a result may be considered adulterated or misbranded.

The special report should reference the manufacturer's 510(k) number. It should be clearly and prominently marked "ADD-TO-FILE" and should be submitted in duplicate to:

Food and Drug Administration Center for Devices and Radiological Health Document Mail Center (HFZ-401) 9200 Corporate Boulevard Rockville, Maryland 20850

This letter will allow you to begin marketing your device as described in your premarket notification. The FDA finding of substantial equivalence of your device to a legally marketed

predicate device results in a classification for your device and thus permits your device to proceed to market.

If you desire specific advice for your device on our labeling regulation (21 CFR Part 801, please contact the Office of Compliance at (301) 594-4591. Additionally, for questions on the promotion and advertising of your device, please contact the Office of Compliance at (301) 594-4639. Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21 CFR Part 807.97). Other general information on your responsibilities under the Act may be obtained from the Division of Small Manufacturers, International and Consumer Assistance at its toll-free number (800) 638-2041 or at (301) 443-6597 or at its Internet address "http://www.fda.gov/cdrh/dsmamain.html".

If you have any questions regarding the content of this letter, please contact Rodrigo C. Perez at (301) 594-1212.

Sincerely yours,

Warrist (i. Sugaram Nancy C. Brogdon

Director, Division of Reproductive, Abdominal and Radiological Devices

Office of Device Evaluation

Center for Devices and Radiological Health

Enclosure(s)

System:

EUB-8500

Intended use: Diagnostic ultrasound imaging or fluid flow analysis if the human body as follows:

	ical Application	Mode of Operation								
General (Track I only)	Specific	В	M	PWD	CWD	Color Doppler	Combined* (Spec.)	Other** (Spec.)		
	Ophthalmic									
	Fetal	N	N	N	N	N	N	N		
	Abdominal	Na	Na	Na	Na	Na	Na	Na		
	Intra-operative (Spec.)	Nb	Nb	Nb		Nb	Nb	Nb		
	Intra-operative (Neuro.)	Z	N	N		N	N	N		
	Laparoscopic	Z	N	N		N	N	N		
	Pediatric	N	N	N	N	N	N	N		
	Small Organ (Spec.)	Nd	Nd	Nd		Nd	Nd	Nd		
	Neonatal Cephalic	N	N	N		N	N	N		
Fetal Imaging	Adult Cephalic	N	Z	N	N	N	N	N		
& Other	Trans-rectal	Nh	Nh	Nh		Nh	Nh	Nh		
	Trans-vaginal	Nf	Nf	Nf		Nf	Nf	Nf		
	Trans-urethral			l			11			
	Trans-esoph. (non-Card.)						1			
	Musculo-skel. (Convent.)	N	N	N		N	N	N		
ł	Musculo-skel. (Superfic.)	N	N	N		N	N	N		
	Intra-luminal									
	Other (spec.)			<u> </u>	<u> </u>					
	Cardiac Adult	N	N	N	N	N	N	N		
Cardiac	Cardiac Pediatric	N	N	N	N	N	N.	N		
	Trans-esophageal (card.)	Ng	Ng	Ng		Ng	Ng	Ng		
	Other (spec.)						1			
Peripheral	Peripheral vessel	N	N	N	N	N	N	N		
Vessel	Other (spec.)									

N = new indication.

Additional C	Comments:
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Subscript "a":	Includes imaging for guidance of percutaneous biopsy of abdominal organs and structures
	(including amniocentesis).
Subscript "b":	Includes imaging of organs and structures exposed during surgery
	(excluding neurosurgery and laparoscopic procedures).
Subscript "c":	Includes thyroid, parathyroid, breast, scrotum, penis.
Subscript "d":	Includes thyroid, parathyroid, breast, scrotum, penis and imaging for guidance of biopsy.
Subscript "e":	Includes imaging for guidance of transrectal biopsy.
Subscript "f":	Includes imaging for guidance of transvaginal biopsy.
Subscript "g":	For pediatric patients.
Subscript "h":	Includes imaging for guidance of transrectal biopsy.

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Concurrence of CDRH, Office of Device Evaluation (ODE)

ence of Ophics, Office of Device Divardation (ODD

(Division Sign-Off)

of Reproductive, Abdominal, ENT

Division of Reproductive, Abdominal, ENT, and Radiological Devices

^{*}Combination of each operating mode, B, M, PWD, CWD and Color Doppler.

^{**}Amplitude Doppler, Harmonic Imaging and 3D Imaging.

System: Transducer:

EUB-8500 EUP-B314

Intended use: Diagnostic ultrasound imaging or fluid flow analysis if the human body as follows:

Clinical Application			Mode of Operation								
General (Track I only)	Specific (Tracks I & III)	В	М	PWD	CWD	Color Doppler	Combined* (Spec.)	Other** (Spec.)			
Ophthalmic	Ophthalmic										
	Fetal	N	N	N		N	N	N			
	Abdominal	Na	Na	Na		Na	Na	Na			
	Intra-operative (Spec.)	Νb	Nb	Nb		Nb	Nb	Nb			
	Intra-operative (Neuro.)			ļ <u> </u>							
	Laparoscopic						1				
	Pediatric			<u> </u>			<u> </u>				
	Small Organ (Spec.)						1				
	Neonatal Cephalic			<u> </u>			<u> </u>				
Fetal Imaging	Adult Cephalic			<u> </u>			<u> </u>				
& Other	Trans-rectal			<u> </u>			ļ				
	Trans-vaginal			<u> </u>			4				
	Trans-urethral						ļ				
	Trans-esoph. (non-Card.)			1	 		ļ				
	Musculo-skel. (Convent.)			ļ	1		 				
	Musculo-skel. (Superfic.)			<u> </u>							
	Intra-luminal		<u> </u>		 		J				
	Other (spec.)			1							
	Cardiac Adult			<u> </u>	11						
Cardiac	Cardiac Pediatric		<u> </u>								
	Trans-esophageal (card.)		<u> </u>	ļ	<u> </u>						
	Other (spec.)			ļ	ļ						
Peripheral	Peripheral vessel		<u> </u>	1			J				
Vessel	Other (spec.)		J	1	<u> </u>						

N = new indication.

Additional Con	
Subscript "a":	Includes imaging for guidance of percutaneous biopsy of abdominal organs and structures
	(including amniocentesis).
Subscript "b":	Includes imaging of organs and structures exposed during surgery
	(excluding neurosurgery and laparoscopic procedures).
Subscript "c":	Includes thyroid, parathyroid, breast, scrotum, penis.
Subscript "d":	Includes thyroid, parathyroid, breast, scrotum, penis and imaging for guidance of biopsy.
Subscript "e":	Includes imaging for guidance of transrectal biopsy.
Subscript "f":	
Subscript "g":	For pediatric patients.
Subscript "h":	Includes imaging for guidance of transrectal biensy.
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Concurrence of CDRH, Office of Device Evaluation (ODE)

(Division Sign-Off)

Division of Reproductive, Abdominal, ENT, and Radiological Devices

^{*}Combination of each operating mode, B, M, PWD, CWD and Color Doppler.

^{**}Amplitude Doppler and 3D Imaging.

System: **EUB-8500** EUP-C514 Transducer:

Intended use: Diagnostic ultrasound imaging or fluid flow analysis if the human body as follows:

Clinical Application		Mode of Operation								
General (Track I only)	Specific (Tracks I & III)	В	M	PWD	CWD	Color Doppler	Combined* (Spec.)	Other** (Spec.)		
Ophthalmic	Ophthalmic									
	Fetal	N	N	N		N	N	N		
:	Abdominal	Na	Na	Na		Na	Na	Na		
	Intra-operative (Spec.)									
	Intra-operative (Neuro.)									
	Laparoscopic						1			
1	Pediatric	N	N	N		N	N	N		
	Small Organ (Spec.)	Nd	Nd	Nd		Nd	Nd	Nd		
	Neonatal Cephalic									
Fetal Imaging	Adult Cephalic									
& Other	Trans-rectal			<u> </u>						
	Trans-vaginal									
	Trans-urethral									
	Trans-esoph. (non-Card.)									
	Musculo-skel. (Convent.)									
	Musculo-skel. (Superfic.)							***		
	Intra-luminal									
	Other (spec.)									
	Cardiac Adult									
Cardiac	Cardiac Pediatric									
	Trans-esophageal (card.)									
	Other (spec.)									
Peripheral	Peripheral vessel									
Vessel	Other (spec.)									

N = new indication.

Ad	ditional	Comments:	

Subscript "a": Includes imaging for guidance of percutaneous biopsy of abdominal organs and structures (including amniocentesis). Includes imaging of organs and structures exposed during surgery Subscript "b": (excluding neurosurgery and laparoscopic procedures) Includes thyroid, parathyroid, breast, scrotum, penis. Subscript "c": Subscript "d": Includes thyroid, parathyroid, breast, scrotum, penis and imaging for guidance of biopsy. Subscript "e": Includes imaging for guidance of transrectal biopsy. Subscript "f": Includes imaging for guidance of transvaginal biopsy. Subscript "g": For pediatric patients. Subscript "h": Includes imaging for guidance of transrectal biopsy.

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Concurrence of CDRH, Office of Device Evaluation (ODE)

(Division Sign-Off) Division of Reproductive, Abdominal, ENT,

and Radiological Devices

^{*}Combination of each operating mode, B, M, PWD, CWD and Color Doppler.

^{**}Amplitude Doppler, Harmonic Imaging and 3D Imaging.

System: EUB-8500 EUP-ES322 Transducer:

Intended use: Diagnostic ultrasound imaging or fluid flow analysis if the human body as follows:

	ical Application	Mode of Operation								
General (Track I only)	Specific	В	М	PWD	CWD	Color Doppler	Combined* (Spec.)	Other** (Spec.)		
Ophthalmic	Ophthalmic									
	Fetal Abdominal Intra-operative (Spec.) Intra-operative (Neuro.) Laparoscopic Pediatric Small Organ (Spec.) Neonatal Cephalic Adult Cephalic									
& Other	Trans-rectal Trans-vaginal Trans-urethral Trans-esoph. (non-Card.) Musculo-skel. (Convent.) Musculo-skel. (Superfic.) Intra-luminal Other (spec.)									
Cardiac	Cardiac Adult Cardiac Pediatric Trans-esophageal (card.) Other (spec.)	N	N	N		N	N	N		
Peripheral Vessel	Peripheral vessel Other (spec.)									

N = new indication.

Additional Comments:

Subscript "a":	Includes imaging for guidance of percutaneous biopsy of abdominal organs and structures
	(including amniocentesis).
Subscript "b":	Includes imaging of organs and structures exposed during surgery
	(excluding neurosurgery and laparoscopic procedures).
Subscript "c":	Includes thyroid, parathyroid, breast, scrotum, penis.
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Subscript "e":	Includes imaging for guidance of transrectal biopsy.
Subscript "f":	Includes imaging for guidance of transvaginal biopsy.

Subscript "g": For pediatric patients.

Subscript "h": Includes imaging for guidance of transrectal biopsy.

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Concurrence of CDRH, Office of Device Evaluation (ODE)

(Division Sign-Off) Division of Reproductive, Abdominal, ENT,

and Radiological Devices

^{*}Combination of each operating mode, B, M, PWD, CWD and Color Doppler.

^{**}Amplitude Doppler and 3D Imaging.

System:

EUB-8500

Transducer:

EUP-ES52M

Intended use: Diagnostic ultrasound imaging or fluid flow analysis if the human body as follows:

	Clinical Application		Mode of Operation								
General (Track I only)	Specific (Tracks I & III)	В	М	PWD	CWD	Color Doppler	Combined* (Spec.)	Other** (Spec.)			
Ophthalmic	Ophthalmic										
	Fetal										
	Abdominal						<u> </u>				
	Intra-operative (Spec.)						1	· · · · · · · · · · · · · · · · · · ·			
	Intra-operative (Neuro.)						ļ				
	Laparoscopic										
	Pediatric										
	Small Organ (Spec.)										
	Neonatal Cephalic										
	Adult Cephalic										
& Other	Trans-rectal						ļ				
	Trans-vaginal						ļ	·			
	Trans-urethral										
	Trans-esoph. (non-Card.)										
	Musculo-skel. (Convent.)						ļ				
	Musculo-skel. (Superfic.)					··· ·					
	Intra-luminal		ļ				 				
	Other (spec.)										
	Cardiac Adult		ļ					•			
Cardiac	Cardiac Pediatric		<u> </u>	<u> </u>							
	Trans-esophageal (card.)	N	N	N	N	N	N	N			
	Other (spec.)		<u> </u>				-				
Peripheral	Peripheral vessel										
Vessel	Other (spec.)				<u> </u>		<u> </u>				

N = new indication.

Additional Comments	\$:
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Subscript "a":	Includes imaging for guidance of percutaneous biopsy of abdominal organs and structures
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Concurrence of CDRH, Office of Device Evaluation (ODE)

(Division Sign-Off)

Division of Reproductive, Abdominal, ENT,

and Radiological Devices

510(k) Number: 16/13/13

^{*}Combination of each operating mode, B, M, PWD, CWD and Color Doppler.

^{**}Amplitude Doppler and 3D Imaging.

System:	EUB-8500
Transducer:	EUP-ES533

Intended use: Diagnostic ultrasound imaging or fluid flow analysis if the human body as follows:

Clin	Clinical Application Mode of Operation							
General (Track I only)	Specific	В	M	PWD	CWD	Color Doppler	Combined* (Spec.)	Other** (Spec.)
Ophthalmic								
	Fetal							
	Abdominal					···	}	
	Intra-operative (Spec.)							
	Intra-operative (Neuro.)						ļ	
	Laparoscopic			ļ			ļ	
	Pediatric						ļ	
	Small Organ (Spec.)							
	Neonatal Cephalic						ļ	
	Adult Cephalic						ļ	
& Other	Trans-rectal						ļ	
	Trans-vaginal							
	Trans-urethral							
1	Trans-esoph. (non-Card.)						!	
	Musculo-skel. (Convent.)							
	Musculo-skel. (Superfic.)							
	Intra-luminal							
•	Other (spec.)						<u> </u>	
	Cardiac Adult							
Cardiac	Cardiac Pediatric							
	Trans-esophageal (card.)	Ng	Ng	Ng		Ng	Ng	Ng
	Other (spec.)							
Peripheral	Peripheral vessel							
Vessel	Other (spec.)							

N = new indication.

Additional Con	
Subscript "a":	Includes imaging for guidance of percutaneous biopsy of abdominal organs and structures
	(including amniocentesis).
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	(excluding neurosurgery and laparoscopic procedures).
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Subscript "e":	Includes imaging for guidance of transrectal biopsy.
Subscript "f":	Includes imaging for guidance of transvaginal biopsy.
Subscript "g":	For pediatric patients.
Subscript "h":	Includes imaging for guidance of transrectal biopsy.
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Concurrence of CDRH, Office of Device Evaluation (ODE)

David A. Lynn (Division Sign-Off) Division of Reproductive, Abdominal, ENT,

and Radiological Devices

^{*}Combination of each operating mode, B, M, PWD, CWD and Color Doppler.

^{**}Amplitude Doppler and 3D Imaging.

System:

EUB-8500

Transducer:

EUP-F531

Intended use: Diagnostic ultrasound imaging or fluid flow analysis if the human body as follows:

Clinical Application			Mode of Operation							
General (Track I only)	Specific (Tracks I & III)	В	M	PWD	CWD	Color Doppler	Combined* (Spec.)	Other** (Spec.)		
Ophthalmic	Ophthalmic									
	Fetal Abdominal	N	N	N		N	N	N		
	Intra-operative (Spec.)	Nb	Nb	Nь		Nb	Nb	Nb		
	Intra-operative (Neuro.)	N	N	N		N	N	N		
	Laparoscopic									
	Pediatric	N	N	N		N	N	N		
	Small Organ (Spec.)	Nc	Nc	Nc		Nc	Nc	Nc		
	Neonatal Cephalic	N	N	N		N	N	N		
Fetal Imaging	Adult Cephalic									
& Other	Trans-rectal	Z	N	N		N	N	N		
	Trans-vaginal	N	N	N		N	N	N		
	Trans-urethral									
	Trans-esoph. (non-Card.)									
	Musculo-skel. (Convent.)				1					
	Musculo-skel. (Superfic.)									
	Intra-luminal									
	Other (spec.)									
	Cardiac Adult									
Cardiac	Cardiac Pediatric									
	Trans-esophageal (card.)									
	Other (spec.)									
Peripheral	Peripheral vessel	N	N	N		N	N	N		
Vessel	Other (spec.)									

N = new indication.

Additional Con	
Subscript "a":	Includes imaging for guidance of percutaneous biopsy of abdominal organs and structures
	(including amniocentesis).
Subscript "b":	Includes imaging of organs and structures exposed during surgery
	(excluding neurosurgery and laparoscopic procedures).
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Subscript "g":	For pediatric patients.
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Concurrence of CDRH, Office of Device Evaluation (ODE)

(Division Sign-Off)
Division of Reproductive, Abdominal, ENT,

and Radiological Devices

510(k) Number: 40/3743

^{*}Combination of each operating mode, B, M, PWD, CWD and Color Doppler.

^{**}Amplitude Doppler and 3D Imaging.

System:

EUB-8500

Transducer:

EUP-L54M

Intended use: Diagnostic ultrasound imaging or fluid flow analysis if the human body as follows:

Clinical Application			Mode of Operation						
General (Track I only)	Specific (Tracks I & III)	В	M	PWD	CWD	Color Doppler	Combined* (Spec.)	Other** (Spec.)	
Ophthalmic	Ophthalmic								
	Fetal								
1	Abdominal	Na	Na	Na		Na	Na	Na	
	Intra-operative (Spec.)								
	Intra-operative (Neuro.)	N	N	N		N	N	N	
	Laparoscopic				1		<u> </u>		
	Pediatric	N	N	N		N	N	N	
	Small Organ (Spec.)	Nd	Nd	Nd		Nd	Nd	Nd	
	Neonatal Cephalic				ļ		ļ		
	Adult Cephalic								
& Other	Trans-rectal						ļ		
	Trans-vaginal			ļ			<u> </u>		
	Trans-urethral			ļ					
	Trans-esoph. (non-Card.)								
	Musculo-skel. (Convent.)	N	N	N		N	N	N	
	Musculo-skel. (Superfic.)	N	N	N		N	N	N	
	Intra-luminal			<u></u>			ļ		
	Other (spec.)			<u> </u>					
	Cardiac Adult								
Cardiac	Cardiac Pediatric						1		
	Trans-esophageal (card.)			<u> </u>			1		
	Other (spec.)								
Peripheral	Peripheral vessel	N	N	N		N	N	N	
Vessel	Other (spec.)			1			1		

N = new indication.

Addition	al (Comi	nents:
Auuiuou	411	лиш	исию.

Subscript "a": Includes imaging for guidance of percutaneous biopsy of abdominal organs and structures (including amniocentesis). Includes imaging of organs and structures exposed during surgery Subscript "b": (excluding neurosurgery and laparoscopic procedures). Includes thyroid, parathyroid, breast, scrotum, penis. Subscript "c": Subscript "d": Includes thyroid, parathyroid, breast, scrotum, penis and imaging for guidance of biopsy. Subscript "e": Includes imaging for guidance of transrectal biopsy. Subscript "f": Includes imaging for guidance of transvaginal biopsy. Subscript "g": For pediatric patients. pt "h": Includes imaging for guidance of transrectal biopsy.
(PLEASE DO NOT WRITE BELOW THIS LINE-CONTINUE ON ANOTHER PAGE IF NEEDED) Subscript "h":

Concurrence of CDRH, Office of Device Evaluation (ODE)

(Division Sign-Off) Division of Reproductive, Abdominal, ENT,

and Radiological Devices

510(k) Number: _ KO13097

^{*}Combination of each operating mode, B, M, PWD, CWD and Color Doppler.

^{**}Amplitude Doppler and 3D Imaging.

System:

EUB-8500

Transducer:

EUP-L53S

Intended use: Diagnostic ultrasound imaging or fluid flow analysis if the human body as follows:

Clinical Application			Mode of Operation							
General (Track I only)	Specific (Tracks I & III)	В	М	PWD	CWD	Color Doppler	Combined* (Spec.)	Other** (Spec.)		
Ophthalmic	Ophthalmic									
	Fetal Abdominal	Na	Na	Na		Na	Na	Na		
	Intra-operative (Spec.) Intra-operative (Neuro.)	N	N	N		N	N	N		
	Laparoscopic Pediatric	N	N	N		N	N	N		
	Small Organ (Spec.) Neonatal Cephalic	Nd	Nd	Nd		Nd	Nd	Nd		
	Adult Cephalic Trans-rectal									
& Other	Trans-vaginal									
	Trans-urethral Trans-esoph. (non-Card.)							Ń		
	Musculo-skel. (Convent.) Musculo-skel. (Superfic.)	N N	N N	N		N N	N N	N N		
	Intra-luminal Other (spec.)									
Cardiac	Cardiac Adult Cardiac Pediatric			1						
Carulac	Trans-esophageal (card.)		 	1						
Peripheral	Other (spec.) Peripheral vessel	N	N	N		N	N	N		
Vessel	Other (spec.)	<u> </u>	<u> </u>	<u></u>						

N = new indication.

Additional Com	ments:
Subscript "a":	Includes imaging for guidance of percutaneous biopsy of abdominal organs and structures
	(including amniocentesis).
Subscript "b":	Includes imaging of organs and structures exposed during surgery
	(excluding neurosurgery and laparoscopic procedures).
Subscript "c":	Includes thyroid parathyroid breast scrotum, penis.
Subscript "d":	Includes thyroid, parathyroid, breast, scrotum, penis and imaging for guidance of biopsy.
Subscript "e":	Includes imaging for guidance of transrectal biopsy.
Subscript "f":	Includes imaging for guidance of transvaginal biopsy.
Subscript "g":	For pediatric patients.
Subscript "h".	Includes imaging for guidance of transrectal biopsy.
PLEAS	SE DO NOT WRITE BELOW THIS LINE-CONTINUE ON ANOTHER PAGE IF NEEDED!
1	Concurrence of CDRH, Office of Device Evaluation (ODE)

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(Division Sign-Off)

Division of Reproductive, Abdominal, ENT,

and Radiological Devices

^{*}Combination of each operating mode, B, M, PWD, CWD and Color Doppler.

^{**}Amplitude Doppler and 3D Imaging.

EUB-8500 System: EUP-OL334 Transducer:

Intended use: Diagnostic ultrasound imaging or fluid flow analysis if the human body as follows:

Clin	ical Application	Mode of Operation						
General (Track I only)	Specific (Tracks I & III)	В	M	PWD	CWD	Color Doppler	Combined* (Spec.)	Other** (Spec.)
	Ophthalmic							
	Fetal Abdominal							
	Intra-operative (Spec.) Intra-operative (Neuro.)		\	N		N	N	N
-	Laparoscopic Pediatric	N	И	IN IN				
	Small Organ (Spec.) Neonatal Cephalic							
	Adult Cephalic Trans-rectal		-					
	Trans-vaginal Trans-urethral		-	<u> </u>				
	Trans-esoph. (non-Card.) Musculo-akel. (Convent.)							
٠	Musculo-skel. (Superfic.) Intra-luminal							
	Other (spec.)							
Cardiac	Cardiac Adult Cardiac Pediatric							
	Trans-esophageal (card.) Other (spec.)							
Peripheral Vessel	Peripheral vessel Other (spec.)							

N = new indication.

Additional Con	aments:
Subscript "a":	Includes imaging for guidance of percutaneous biopsy of abdominal organs and structures
	(including amniocentesis).
Subscript "b":	Includes imaging of organs and structures exposed during surgery
	(excluding neurosurgery and laparoscopic procedures).
Subscript "c":	Includes thyroid, parathyroid, breast, scrotum, penis.
Subscript "d":	Includes thyroid, parathyroid, breast, scrotum, penis and imaging for guidance of biopsy.
Subscript "e":	Includes imaging for guidance of transrectal biopsy.
Subscript "f":	Includes imaging for guidance of transvaginal biopsy.
Subscript "g":	For pediatric patients.
Subscript "h":	Includes imaging for guidance of transrectal biopsy.
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(Division Sign-Off)

Division of Reproductive, Abdominal, ENT, and Radiological Devices

510(k) Number: <u>13013772</u>

^{*}Combination of each operating mode, B, M, PWD, CWD and Color Doppler.

^{**}Amplitude Doppler and 3D Imaging.

EUB-8500 System: EUP-R53W Transducer:

Intended use: Diagnostic ultrasound imaging or fluid flow analysis if the human body as follows:

	ical Application	Mode of Operation						
General (Track I only)	Specific (Tracks I & III)	В	M	PWD	CWD	Color Doppler	Combined* (Spec.)	Other** (Spec.)
Ophthalmic	Ophthalmic							
	Fetal							
!	Abdominal							
	Intra-operative (Spec.)				1			
İ	Intra-operative (Neuro.)							
	Laparoscopic							
	Pediatric						ļ	
	Small Organ (Spec.)							
	Neonatal Cephalic						1	
Fetal Imaging	Adult Cephalic							
& Other	Trans-rectal	N	N	N		N	N	N
	Trans-vaginal							
	Trans-urethral							
	Trans-esoph. (non-Card.)							
	Musculo-skel. (Convent.)							
	Musculo-skel. (Superfic.)							
	Intra-luminal							
	Other (spec.)							
	Cardiac Adult							
Cardiac	Cardiac Pediatric							
	Trans-esophageal (card.)							
	Other (spec.)							
Peripheral	Peripheral vessel							
Vessel	Other (spec.)							

N = new indication.

Ad	ditional	Comments:	

Subscript "a": Includes imaging for guidance of percutaneous biopsy of abdominal organs and structures (including amniocentesis). Includes imaging of organs and structures exposed during surgery Subscript "b": (excluding neurosurgery and laparoscopic procedures)
Includes thyroid, parathyroid, breast, scrotum, penis. Subscript "c": Subscript "d": Includes thyroid, parathyroid, breast, scrotum, penis and imaging for guidance of biopsy. Subscript "e": Includes imaging for guidance of transrectal biopsy. Includes imaging for guidance of transvaginal biopsy. Subscript "f": Subscript "g": For pediatric patients. ipt "h": Includes imaging for guidance of transrectal biopsy.
(PLEASE DO NOT WRITE BELOW THIS LINE-CONTINUE ON ANOTHER PAGE IF NEEDED) Subscript "h":

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and Radiological Devices

510(k) Number: 10/3722

^{*}Combination of each operating mode, B, M, PWD, CWD and Color Doppler.

^{**}Amplitude Doppler and 3D Imaging.

System:

EUB-8500

Transducer:

EUP-S50

Intended use: Diagnostic ultrasound imaging or fluid flow analysis if the human body as follows:

Clinical Application			Mode of Operation							
General (Track I only)	Specific (Tracks I & III)	В	М	PWD	CWD	Color Doppler	.Combined* (Spec.)	Other** (Spec.)		
Ophthalmic	Ophthalmic									
	Fetal	N	N	N	N	N	N	N		
	Abdominal	N	N	N	N	N	N	N		
	Intra-operative (Spec.)		L				1			
	Intra-operative (Neuro.)						1 1			
	Laparoscopic									
	Pediatric	N	N	N	N	N	N	N		
	Small Organ (Spec.)									
	Neonatal Cephalic		1	<u> </u>						
Fetal Imaging	Adult Cephalic	N	N	N	N	N	N	N		
& Other	Trans-rectal		<u> </u>	<u> </u>						
	Trans-vaginal		<u> </u>		L					
	Trans-urethral									
	Trans-esoph. (non-Card.)									
	Musculo-skel. (Convent.)		<u> </u>	<u> </u>						
	Musculo-skel. (Superfic.)		<u> </u>	<u> </u>						
	Intra-luminal		<u> </u>	1			ļ			
	Other (spec.)									
	Cardiac Adult	N	N	N	N	N	N	N		
Cardiac	Cardiac Pediatric	N	N	N	N	N	N	N		
•	Trans-esophageal (card.)	<u> </u>	Ļ		1		1			
	Other (spec.)		<u> </u>				 			
Peripheral	Peripheral vessel	N	N	N	N	N	N	N		
Vessel	Other (spec.)		<u> </u>	<u> </u>						

N = new indication.

(including amniocentesis). Subscript "b": Includes imaging of organs and structures exposed during surgery	ubscript "a":
Subscript "h": Includes imaging of organs and structures exposed during surgery	
Datoutipe of Indiana in the Indiana	abscript "b":
(excluding neurosurgery and laparoscopic procedures).	
Subscript "c": Includes thyroid, parathyroid, breast, scrotum, penis.	abscript "c":
Subscript "d": Includes thyroid, parathyroid, breast, scrotum, penis and imaging for guidance of biopsy.	abscript "d":
Subscript "e": Includes imaging for guidance of transrectal biopsy.	ibscript "e":
Subscript "f": Includes imaging for guidance of transvaginal biopsy.	abscript "f":
Subscript "g": For pediatric patients.	ibscript "g":
Subscript "h": Includes imaging for guidance of transrectal biopsy.	abscript "h":

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and Radiological Devices

^{*}Combination of each operating mode, B, M, PWD, CWD and Color Doppler.

^{**}Amplitude Doppler, Harmonic Imaging and 3D Imaging.

System: EUB-8500 EUP-TC3 Transducer:

Intended use: Diagnostic ultrasound imaging or fluid flow analysis if the human body as follows:

Clinical Application		Mode of Operation							
General (Track I only)	Specific (Tracks I & III)	В	M	PWD	CWD	Color Doppler	Combined* (Spec.)	Other** (Spec.)	
Ophthalmic	Ophthalmic								
	Fetal								
	Abdominal								
	Intra-operative (Spec.)			<u> </u>					
	Intra-operative (Neuro.)			<u> </u>					
	Laparoscopic			<u> </u>	L			- 	
	Pediatric			<u> </u>	oxdot				
	Small Organ (Spec.)								
	Neonatal Cephalic			<u> </u>					
	Adult Cephalic			<u> </u>					
& Other	Trans-rectal								
	Trans-vaginal			<u> </u>			1		
	Trans-urethral								
	Trans-esoph. (non-Card.)			<u> </u>	L				
,	Musculo-skel. (Convent.)			<u> </u>					
	Musculo-skel. (Superfic.)			<u> </u>					
	Intra-luminal			ļ					
	Other (spec.)								
	Cardiac Adult				N		<u> </u>		
Cardiac	Cardiac Pediatric			<u> </u>	N				
•	Trans-esophageal (card.)		<u> </u>	_	 		ļ		
	Other (spec.)			<u> </u>					
Peripheral	Peripheral vessel		<u> </u>		N		1	·	
Vessel	Other (spec.)		<u> </u>	<u>l</u>					

N = new indication.

Additional Comments:

Subscript "a": Includes imaging for guidance of percutaneous biopsy of abdominal organs and structures (including amniocentesis). Includes imaging of organs and structures exposed during surgery Subscript "b": (excluding neurosurgery and laparoscopic procedures). Includes thyroid, parathyroid, breast, scrotum, penis. Subscript "c": Includes thyroid, parathyroid, breast, scrotum, penis and imaging for guidance of biopsy. Subscript "d": Includes imaging for guidance of transrectal biopsy.

Includes imaging for guidance of transvaginal biopsy. Subscript "e": Subscript "f": For pediatric patients. Subscript "g": Subscript "h": Includes imaging for guidance of transrectal biopsy.

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(Division Sign-Off) Division of Reproductive, Abdominal, ENT,

and Radiological Devices

510(k) Number: 40/3024

^{*}Combination of each operating mode, B, M, PWD, CWD and Color Doppler.

^{**}Amplitude Doppler.

System:

EUB-8500

Transducer:

EUP-U533

Intended use: Diagnostic ultrasound imaging or fluid flow analysis if the human body as follows:

Clinical Application		Mode of Operation							
General (Track I only)	Specific (Tracks I & III)	В	М	PWD	CWD	Color Doppler	Combined* (Spec.)	Other** (Spec.)	
Ophthalmic	Ophthalmic							<u></u>	
	Fetal Abdominal Intra-operative (Spec.)								
	Intra-operative (Neuro.) Laparoscopic								
	Pediatric Small Organ (Spec.) Neonatal Cephalic								
Fetal Imaging & Other	Adult Cephalic Trans-rectal	Nh	Nh	Nh		Nh	Nh	Nh	
	Trans-vaginal Trans-urethral								
	Trans-esoph. (non-Card.) Musculo-skel. (Convent.)								
	Musculo-skel. (Superfic.) Intra-luminal Other (spec.)								
Cardiac	Cardiac Adult Cardiac Pediatric								
	Trans-esophageal (card.) Other (spec.)								
Peripheral Vessel	Peripheral vessel Other (spec.)								

N = new indication.

Additional Con	iments:
Subscript "a":	Includes imaging for guidance of percutaneous biopsy of abdominal organs and structures
	(including amniocentesis).
Subscript "b":	Includes imaging of organs and structures exposed during surgery
	(excluding neurosurgery and laparoscopic procedures).
Subscript "c":	Includes thyroid, parathyroid, breast, scrotum, penis.
Subscript "d":	Includes thyroid, parathyroid, breast, scrotum, penis and imaging for guidance of biopsy.
Subscript "e":	Includes imaging for guidance of transrectal biopsy.
Subscript "f":	Includes imaging for guidance of transvaginal biopsy.
Subscript "g":	For pediatric patients.
Subscript "h":	Includes imaging for guidance of transrectal biopsy.

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^{*}Combination of each operating mode, B, M, PWD, CWD and Color Doppler.

^{**}Amplitude Doppler and 3D Imaging.

EUB-8500 System: Transducer: EUP-V53W

Intended use: Diagnostic ultrasound imaging or fluid flow analysis if the human body as follows:

Clinical Application		Mode of Operation							
General (Track I only)		В	M	PWD	CWD	Color Doppler	Combined* (Spec.)	Other** (Spec.)	
Ophthalmic	Ophthalmic		•						
	Fetal	N	N	N		N	N	N	
	Abdominal								
	Intra-operative (Spec.)								
	Intra-operative (Neuro.)								
	Laparoscopic								
	Pediatric								
	Small Organ (Spec.)								
Fetal Imaging & Other	Neonatal Cephalic								
	Adult Cephalic								
	Trans-rectal	Ne	Ne	Ne		Ne	Ne	Ne	
	Trans-vaginal	Nf	Nf	Nf		Nf	Nf	Nf	
	Trans-urethral								
	Trans-esoph. (non-Card.)								
	Musculo-skel. (Convent.)								
	Musculo-skel. (Superfic.)								
·	Intra-luminal								
	Other (spec.)							,	
	Cardiac Adult								
Cardiac	Cardiac Pediatric								
	Trans-esophageal (card.)								
	Other (spec.)								
	Peripheral vessel								
Vessel	Other (spec.)								

N = new indication.

Additional Comments:

Subscript "a": Includes imaging for guidance of percutaneous biopsy of abdominal organs and structures (including amniocentesis). Subscript "b": Includes imaging of organs and structures exposed during surgery (excluding neurosurgery and laparoscopic procedures) Subscript "c": Includes thyroid, parathyroid, breast, scrotum, penis. Subscript "d": Includes thyroid, parathyroid, breast, scrotum, penis and imaging for guidance of biopsy. Subscript "e": Includes imaging for guidance of transrectal biopsy. Subscript "f": Includes imaging for guidance of transvaginal biopsy. Subscript "g": Subscript "h": For pediatric patients. pt "h": Includes imaging for guidance of transrectal biopsy.
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and Radiological Devices

^{*}Combination of each operating mode, B, M, PWD, CWD and Color Doppler.

^{**}Amplitude Doppler and 3D Imaging.